



## CMF / CRF Details

**CMF ID: 7913**

### **Roundabout geometry**

**Description:** Various geometric elements of roundabout

**Prior Condition:** Approach gradient of two percent

**Category:** Intersection geometry

**Study:** [\*Development of Safety Performance Measures for Urban Roundabouts in India, Anjana and Anjaneyulu, 2015\*](#)

**Star Quality Rating:**



[\[View score details\]](#)

### **Crash Modification Factor (CMF)**

**Value:**

$$CMF_{PDO,AG} = \exp [-0.092 \times (AG - 2)]$$

**Adjusted Standard Error:**

**Unadjusted Standard Error:**

### **Crash Reduction Factor (CRF)**

**Value:**

*(This value indicates an **increase** in crashes)*

**Adjusted Standard Error:**

**Unadjusted Standard Error:**

### Applicability

**Crash Type:**

All

**Crash Severity:**

0 (property damage only)

**Roadway Types:**

Not specified

**Number of Lanes:**

**Road Division Type:**

**Speed Limit:**

**Area Type:**

Urban

**Traffic Volume:**

**Time of Day:**

All

### *If countermeasure is intersection-based*

**Intersection Type:**

**Intersection Geometry:**

No values chosen.

**Traffic Control:**

Roundabout

**Major Road Traffic Volume:**

19197 to 71307 Average Daily Traffic (ADT)

**Minor Road Traffic Volume:**

### Development Details

**Date Range of Data Used:**

2008 to 2010

**Municipality:**

Kerala

<b>State:</b>	
<b>Country:</b>	India
<b>Type of Methodology Used:</b>	Regression cross-section
<b>Sample Size Used:</b>	

<b>Other Details</b>	
<b>Included in Highway Safety Manual?</b>	No
<b>Date Added to Clearinghouse:</b>	Mar-08-2016
<b>Comments:</b>	CMF function for non-injury (PDO) crashes for Approach Gradient (AG) of roundabout (percent). The CMF applies to roundabout approaches.

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